

SUMMARY

Technical Advisory Group Meeting
Wednesday June 21, 2023
1:00 PM, Virtual Meeting via Microsoft Teams

I. Introduction

Attendees introduced themselves in the chat and Jai-W Hayes-Jackson (NCTCOG) invited everyone to introduce themselves.

II. Recap March 6th Meeting

a. Update on current progress

Jai-W Hayes-Jackson presented the updates on ongoing progress of the project detailing meetings and deliverables that have been worked on.

b. Review project team's timeline and schedule

Jai-W Hayes-Jackson presented the technical tasks that were to be completed or started within the next 6 months. The technical advisory group gave input on data and experience.

Task 3.1.1 - Investigate and add detail to the Trinity River WHA hydrologic model

Denis Qualls (City of Dallas) - asked what kind of detail the project team needs.

Matt Lepinski (USACE – referred to the infrm.us website model. USACE and the InFRM team have done a comprehensive study regarding what is an accurate flow through this area. Other parts of the country, including our region, haven't had that detail in the past. But if you open the HEC-HMS model, several subbasins in DFW have outlets or discharge at downstream end, and a flow is there, but that might be one discharge/flow for a larger drainage area but not at a smaller/local scale.

Denis Qualls (City of Dallas) – asked about the need for data on smaller tributaries.

Matt Lepinski (USACE) – stated we need to define smaller subbasins. Seeking input on approach for how best to do that. We're doing pilot studies including Bridgeport and taking one basin that covers the entire area and breaking into smaller subbasins to produce additional discharges/flows.

Denis Qualls (City of Dallas) – shared the City of Dallas has hydrologic data, but it is not HMS, it is naturalized data and may not be helpful. The city doesn't have as many stream gauges to capture this data.

Matt Lepinski (USACE) – stated the project team would like to do validation/calibration against other data sets and historic information. We are always looking for high water mark information, historic data, other discharges we can compare to.

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Denis Qualls (City of Dallas) – explained the City of Dallas has GIS data. DWU data on the levee but the focus of study seems to be on more rural data.

Daniel Li (UTA) – states we are looking for H&H data and how we can further study design structures to optimize design allocation of original storms. Aiming to develop optimization method.

Task 3.3.3 - List GSI and NBS suitability index based on geological, social, and environmental parameters and ranking of project types and locations

Kathy Jack (The Nature Conservancy) – The Nature Conservancy gave a presentation at the TSI whiteboard meeting regarding the TNC Trinity Floodplain Planning & Prioritization tool (<https://maps.freshwaternet.org/trinity-river-basin-floodplain/>). The information from this tool has data that could contribute to 3.3.3 and other items.

Nick Fang (UTA) – Task 3.3.3 is one of Dr. Jaber’s tasks; he has mapped out a lot of NBS and GSI methods and locations.

Matt Lepinski (USACE) – We intend to ultimately provide good non-regulatory maps and data people can use, and a menu of options, a heat map of where those options make the most sense. It won't be one size fits all.

Task 3.2.9 - Optimization study: model ideal location and sizing for ponds and other drainage/flood control structures and consider potential alternatives to reduce downstream flows; Task 3.3.9 -Web-based map that identifies flood prone areas and ideal locations for implementation of GSI and NBS

Blake Alldredge (UTRWD – regarding Tasks 3.2.9 and 3.3.9, asked would conserving land in its natural state through conservation easement and data on ideal locations for this be relevant. The Denton County Greenbelt plan addresses stream corridors, but lots of upland areas would benefit from conservation too; this would have dramatic impact on water quality and water quantity, particularly in rapidly developing areas near Lewisville Lake. Currently there is no data on the benefits of preserving an acre; a company called Limnotech has been working to do this kind of analysis.

Stephen Nichols (City of Fort Worth) – the City of Fort Worth is currently developing an open space program and is purchasing areas. The city has prioritized different locations based on ecological or environmental factors. Fort Worth would like to know if this type of data already exists for a region. Regarding drainage GIS, Steve would like to know what type of data the project needs (urban drainage or streams etc.).

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Matt Lepinski (USACE) - from stormwater management side (H&H specific), we need to leverage existing stream data. 2D hydraulic modeling captures some additional flooding and Dr. Jaber is addressing urban flooding with overland flow with SWOT and SWMM models - here is where that data would be useful, starting with riverine and then going into urban drainage.

Stephen Nichols (City of Fort Worth) – will investigate what data he can provide.

Kathy Jack (The Nature Conservancy) – The Nature Conservancy conducted a study with Dallas Water Utilities. Dr. Jaber used two different analyses: for Denton County, the study covered surface level, and for the City of Dallas it was a detailed SWMM study; it required digitized stormwater networks for the entire city. Suggests digitizing based plats if there is no digitized data, but this could be time consuming.

Stephen Nichols (City of Fort Worth) – The City of Fort Worth stormwater program is pursuing a development-based analysis for Mary's Creek, halfway through preparing watershed study for smaller drainage areas in Walsh Ranch. There is emphasis on mitigating impacts from Walsh Ranch and other large developments. The analysis will generate 1D cross sections, different hydrology, and other deliverables in the next 6 months they could share.

3.5.7 – Evaluate opportunities to expand the Corridor Development Certificate process into the Project Area

Stephen Nichols (City of Fort Worth) – states the CDC process considers valley storage in the Trinity River. The City of Fort Worth is looking for stakeholder groups regarding flood storage further upstream from the existing corridor.

Matt Lepinski (USACE) – FEMA and USACE encourage communities to adopt higher standards to promote resiliency. The Corridor Development Certificate is unique in that it takes a regional multi-community approach to higher standards, as opposed to an individual community adopting a higher standard such as freeboard. COMMON VISION Program and the CDC process are extremely innovative in considering future flood risks and regulating to that. This TSI project could potentially incentivize people to want to join COMMON VISION and expand the CDC model out. FEMA is working with TWDB on a 2D Base Level Engineering study that covers Mary's Creek and the surrounding Lower West Fork Trinity. The underlying hydrologic models we plan to use across the study area is this BLE data. BLE is being completed across the state and region and WHA studies are as well, which is why they make sense to leverage for efforts like TSI.

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Cameron Cornett (FEMA) – TWDB has coordinated with FEMA and USACE to ensure that new studies will utilize WHA where available and calibrate BLE to those studies. Denton Creek flows would be updated to match InFRM flows since that is an older BLE study. TSI intends to leverage the methodology that is being developed on other regional studies (such as the Neches WHA) to retroactively integrate these WHA flows into BLE.

Kathy Jack (The Nature Conservancy) – shared link to TNC & AgriLife study: GSI for Urban Flood Resilience: Opportunity Analysis in Dallas, TX:
<https://www.nature.org/content/dam/tnc/nature/en/documents/GSIanalysisREVFINAL.pdf?vu=dallasgsi>

Kathy (The Nature Conservancy) – provided additional links:

- AgriLife: Incorporating GSI into Hazard Mitigation Planning (Denton County)
<https://agrilife.org/lid/projects/incorporating-gi-lid-nature-based-systems-hazard-mitigation-plan/>
- Trinity Floodplain Prioritization Tool:
<https://maps.freshwaternetwork.org/trinity-river-basin-floodplain/>

Lisa Biggs (City of Fort Worth) – FEMA has been doing Base Level Engineering (BLE) for upstream areas. She asks are we utilizing some of that data for the TSI model, and TSI team confirmed that they are.

III. Technical Advisory Group Action Items

a. Funding

Kate Zielke gave an overview of implementation funding ideas. We investigated the CDBG grants; those grants can be used to help fund local projects for communities.

a. Education and Outreach

Kate announced we have met with ULI to discuss participating in the Technical Assistance Program. NCTCOG has applied to receive guidance on how to engage developers and the real estate sector during this project. We have identified two experts on aquifer recharge as well to help address water supply. We are also seeking input from NCTCOG's Public Works Council and have reached out to TxDOT.

b. Data and Technical Needs

Kate Zielke has detailed how we have researched policies from Maine and Florida.

IV. Next Steps

a. Participant Agreement Form

Jai-W Hayes-Jackson (NCTCOG) presented the Participant Agreement Form to the Technical Advisory Group for feedback.

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Denis Qualls (City of Dallas) – calling this an "agreement" can make it difficult cities must take it to their legal department. If this is just a volunteer information form, the team should consider changing the name.

Kathy Jack (The Nature Conservancy) – agrees that “agreement” is not the right term.

Rosemarie Klee (TxDOT) – asks what will happen if no one signs.

Blake Alldredge (UTRWD) – suggests calling it a "participant information form" instead.

Kate Zielke (NCTCOG) – explains that NCTCOG has been asked to sign similar in past for other projects and based the form off of previous templates. She asks if people like "participant Information form" instead.

Kathy Jack (The Nature Conservancy) – agrees with changing the name and is also concerned about using the word "advocates" in the TAG goals and suggests replacing it with “supports”.

b. Form subcommittees

Jai-W Hayes-Jackson (NCTCOG) asks if the group is interest in forming subcommittees – Kate Zielke (NCTCOG) – explains the subcommittees would occur in place of the large Technical Advisory Group Meeting.

Kathy Jack (The Nature Conservancy) - prefers combined meetings because The Nature Conservancy is interested in all topics.

Kate Zielke announces we will proceed with the larger Technical Advisory Group meetings.

Attendees	Organization
Amanda Black	City of Paradise
Bill Smith	City of Weatherford
Blake Alldredge	UTRWD
Cameron Cornett	FEMA
Chad Marbut	City of Weatherford
Daniel Li	UTA
Denis Qualls	City of Dallas
Erin Blackman	NCTCOG
Glenn Clingenpeel	TRA
Heather Firn	TRA

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Jacob Lesue	Dewberry
Jai-W Hayes-Jackson	NCTCOG
Jarred Overbey	Halff Associates
Jerri Daniels	Dewberry
Jim Keith	Freese & Nichols
Jody Loza	NCTCOG
Kate Zielke	NCTCOG
Kathy Jack	The Nature Conservancy
Lisa Biggs	City of Fort Worth
Liz Rophael	NCTCOG
Malcolm Hamilton	TWDB
Marcus Gellner	Wise County
Maribel Martinez	NCTCOG
Matt Lepinski	USACE
Michelle Wood-Ramirez	TRWD
Nick Fang	UTA
Rich Tharp	City of White Settlement
Rose Marie Klee	TxDOT
Shannon Abolmaali	UTA
Stephen Nichols	City of Fort Worth